

Title	Install, join, and terminate cables		
Level	4	Credits	7

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – install cables using cable support systems; and – join and terminate cables.
----------------	--

Classification	Electrical Engineering > Electrical Installation and Maintenance
-----------------------	--

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job. However, Outcome 2 may be assessed in a classroom, workshop, or a simulated work environment.
- 2 Unit standards or equivalent prior knowledge and skills recommended:
Unit 32615 *Demonstrate cable handling and fixing techniques, pre-wire electrical circuits, and join and test TPS cables*;
Unit 32616 *Apply knowledge of common cords, cables, and electrical fittings*;
Unit 32621 *Demonstrate knowledge of wiring support systems and cable installation*.
- 3 Definition
Safe and sound practice – as it relates to the installation of electrical equipment is defined in AS/NZS 3000.
- 4 References
AS/NZS 3000 (version as cited in the Electricity (Safety) Regulations), *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*;
AS/NZS 3008.1.2:2017, *Electrical installations - Selection of cables (Cables for alternating voltages up to and including 0.6/1 kV - Typical New Zealand conditions)*;
AS/NZS 4836:2011, *Safe working on or near low-voltage electrical installations and equipment*;
Electricity (Safety) Regulations 2010;
New Zealand Building Code;
or any current subsequent amended or replacement versions.
- 5 This unit standard can be used together with other relevant unit standards, additional learning and workplace training to meet the requirements of the Electrical Workers Registration Board (EWRB) core competencies, available at <https://www.ewrb.govt.nz>.
- 6 This unit standard applies to installations and equipment rated above extra-low voltage unless specifically stated.

- 7 Range
- a Candidates may refer to current legislation and Standards during assessment.
 - b Demonstration of safe working practices and installation in accordance with *safe and sound practice* are essential components of assessment of this unit standard.
 - c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
 - i legislation;
 - ii policies and procedures;
 - iii ethical codes;
 - iv Standards – may include but are not limited to those listed in Schedule 2 of the Electricity (Safety) Regulations 2010;
 - v applicable site, enterprise, and industry practice; and
 - vi where appropriate, manufacturers' instructions, specifications, and data sheets.
- 8 Candidates are expected to locate and reference the relevant clauses in the Standards that relate to the electrical work being undertaken.

Outcomes and performance criteria

Outcome 1

Install cables using cable support systems.

Performance criteria

1.1 Select and install cable support systems and cables.

Range three different cable systems;
may include but is not limited to – metal conduit, PVC conduit,
cable ladder, perforated tray, trough, ducting, catenary.

1.2 Determine whether fire and/or moisture barriers are required to be created or maintained for the cable installations in performance criterion 1.1.

1.3 Calculate cable current carrying capacity adjustments using current de-rating factors due to the installation environment.

Range two different installation environments;
installation factors affecting the cable current rating may include
but are not limited to – installation method, grouping/bunching of
cables, environmental conditions.

Outcome 2

Join and terminate cables.

Performance criteria

2.1 Join cables using suitable jointing systems.

Range joins in two different size cables.

2.2 Terminate mains and submains cables.

Range two mains, two submains.

Planned review date	31 December 2026
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 March 2022	N/A

Consent and Moderation Requirements (CMR) reference	0003
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihanga.nz if you wish to suggest changes to the content of this unit standard.